BY ORDER OF THE COMMANDER
934TH AIRLIFT WING

934th AIRLIFT WING INSTRUCTION 32-1005

7 January 1998

Civil Engineering

MANAGEMENT PROCEDURES FOR DE-ICING/ANTI-ICING OPERATIONS

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

NOTICE: This publication is available digitally on the HQ AFRC WWW site at: http://www.afrc.af.mil and the AFRCEPL (CD-ROM) published monthly.

OPR: 934 SPTG/CEV (John Marchetti)

Certified by: 934 SPTG/CC (Lt Col Paul Groskreutz)

Supersedes 934 AWI 32-1005, 17 December 1996

Pages: 5

Distribution: F

This instruction outlines the responsibilities and procedures necessary to address environmental resource protection relating to aircraft de-icing/anti-icing operations. The instruction implements guidance from AFRC/CV memorandum, 21 February 1995, Anti-icing/De-icing of Planes, Aprons, and Runways and AFPD 32-10, *Installations and Facilities.* This instruction applies to 934th Airlift Wing (AW) and tenant operations conducting de-icing on 934 AW facilities.

SUMMARY OF REVISIONS

This revision updates minor changes, telephone extensions, office symbols, and changes paragraph 3.4.4. to read from "properly emptied into the de-icing pad collection tank" to "discharged to MAC impoundments". A (|) indicates revisions from previous version.

1. Background. De-icing and anti-icing operations are receiving increased scrutiny from federal, state and local regulatory agencies due to the potential negative environmental impact posed by the use of aircraft de-icing/anti-icing fluids (ADAF). In an effort to proactively address this issue, HQ AFRC has established a long-term goal of zero discharge of ADAF. AFRC installations have been encouraged to plan, program and execute projects necessary to accomplish this goal. Immediate implementation of "best management practices" is required to minimize the discharge of pollutants. Pilot, crew and community safety remains the first priority; all applicable Air Force instructions and Technical Orders pertinent to ensuring safe operations are to be followed. Safety, environmental and operational factors must be evaluated before commencing de-icing/anti-icing operations which may discharge pollutants.

2. Best Management Practices:

2.1. Avoid conducting flight operations when de-icing/anti-icing is required unless the mission is critical. When possible, flights should be canceled or postponed if the use of ADAF will be necessary. As

a guideline, routine training missions, missions flown to maintain or regain currency, and other non-higher headquarters directed missions would not be considered critical missions.

2.2. Discourage flight of non-critical missions to Minneapolis-St. Paul by transients when icing conditions are anticipated.

2.3. The order of preference to be followed for aircraft de-icing/anti-icing is as follows:

2.3.1. Whenever possible, place the aircraft into the hangar to prevent icing when a storm event is expected, or to accomplish de-icing when necessary.

2.3.2. When ADAF use is necessary, position aircraft on the De-icing Pad to accomplish de-icing.

2.3.3. When ADAF must be applied to aircraft away from the De-icing Pad, ensure that sweeping equipment is used to collect ADAF from the ramp to the maximum extent possible.

2.3.4. In all cases when ADAF is used, avoid over spray of aircraft to minimize excess application of ADAF.

3. Responsibilities. During adverse weather conditions that will require de-icing/anti-icing to safely conduct flight operations, a coordinated effort is necessary to ensure that potential environmental impacts are minimized. Responsibility for accomplishing essential tasks is assigned as follows:

3.1. Wing Commander (934 AW/CC):

3.1.1. Ensures the best management practices are followed in all aspects of de-icing/anti-icing operations.

3.1.2. Has ultimate authority for making operational and decisions related to de-icing/anti-icing?

3.2. Operations Group Commander (934 OG/CC):

3.2.1. Determines the criticality of any mission (i.e., whether or not a mission must be flown).

3.2.2. Notifies Flightline when critical missions are anticipated to coincide with adverse weather.

3.2.3. Coordinates with Flightline on availability of De-icing Pad to meet tenant activity requests.

3.3. Flightline (934 MXS/LGMO):

3.3.1. Performs necessary aircraft de-icing/anti-icing according to the order of preference in the best management practices.

3.3.2. Use the *Deicing/Anti-icing Procedures Checklist* (see attachment) to ensure coordination with other organizations when ADAF will be used.

3.3.3. Coordinates with Civil Engineering Operations & Maintenance Branch (CEO) for snow removal from the De-icing Pad and ramp areas when necessary.

3.3.4. Activates the De-icing Pad's drainage valve to the collection tank position prior to beginning ADAF application.

3.3.5. Ensures that application of ADAF onto aircraft occurs on the De-icing Pad to the maximum extent possible.

3.3.6. Coordinates with Civil Engineering Environmental Branch (CEV) if necessary for determining when the De-icing Pad drainage valve can be switched to the storm sewer position after each event in which ADAF is applied.

3.3.7. Records and provides data to CEV on the quantity of ADAF applied and the ratio of mixture for each event in which ADAF is used.

3.3.8. Notifies CEV when the ADAF collection tank needs to be pumped.

3.3.9. Ensures personnel are educated on the proper use and operating procedures for ADAF application equipment.

3.3.10. Coordinates with Operations Group on availability of De-icing Pad to meet tenant activity requests for use.

3.4. Civil Engineering Operations & Maintenance Branch (934 SPTG/CEO):

3.4.1. Performs snow removal from De-icing Pad, and other ramp areas as necessary, prior to the application of ADAF.

3.4.2. Provides a list of designated personnel to be called in by Security Police, for snow removal and ADAF collection when needed during off-duty periods.

3.4.3. Provides equipment (sweeper truck) and personnel to supplement ADAF collection during and after ADAF application.

3.4.4. Ensures that any ADAF collected by sweeper truck is discharged to Metropolitan Airports Commission impoundments.

3.4.5. Ensures personnel are educated on the proper use and operating procedures for snow removal equipment and for ADAF collection equipment.

3.5. Civil Engineering Environmental Branch (934 SPTG/CEV):

3.5.1. Assists 934 MXS/LGMO as necessary for determining when the collection tank valve can be closed after each event in which ADAF is applied.

3.5.2. Initiates contracts for ADAF removal from the De-icing Pad collection tank.

3.5.3. Ensures used ADAF is removed from the collection tank when notified by 934 MXS/LGMO.

3.5.4. Provide escorts for contractor personnel performing removal of used ADAF from collection tank.

3.5.5. Ensures that storm water monitoring and analyses is conducted according to regulatory requirements.

3.5.6. Arranges for analyses of collection tank contents when necessary.

3.5.7. Ensures de-icing/anti-icing practices and policies conform to environmental regulatory requirements, and Air Force or MAJCOM guidance.

3.5.8. Accomplishes data reporting, as necessary, to regulatory agencies, HQ AFRC, and Metropolitan Airports Commission.

3.6. Security Police (934 SPTG/SF). Calls in personnel designated by CEO for snow removal and ADAF collection when necessary during off-duty hours.

3.7. Tenant Activities:

3.7.1. Uses the best management practices to guide decision making regarding de-icing/anti-icing operations prior to requesting use of the 934 AW De-icing Pad.

3.7.2. Directs requests for use of 934 AW De-icing Pad to 934 MXS/LGMO.

3.7.3. Conducts ADAF application in a manner that minimizes over spray.

3.7.4. When conducting de-icing/anti-icing operations on the 934 AW De-icing Pad, provides equipment and personnel to ensure that used ADAF is contained in accordance with wing policies.

3.8. Transportation (934 LSS/LGT). Ensure that sweeper maintenance is completed each year prior to start of ice and snow season.

MICHAEL F. GJEDE, Colonel, USAFR
Commander

Attachment 1

DEICING/ANTI-ICING PROCEDURES CHECKLIST

A1.1. This Checklist will be used by 934 MXS/LGMO during events when ADAF will be applied:

A1.1.1. Notify CEO of the need for sweeper trucks, or for snow removal from the De-icing Pad and/or other ramp areas. During normal operating hours, notify the CE Customer Service Clerk (x1918). During off-duty periods, notify Security Forces (x1100) to call in the designated personnel.

A1.1.2. During normal operating hours, notify CEV x1915 that ADAF application will occur. Identify whether the operation will be conducted *on* the De-icing Pad or *off* the Pad at another ramp location.

A1.1.3. To the maximum extent practicable, snow and ice should be removed from the De-icing Pad or other locations where ADAF application will occur prior to beginning the operation.

A1.1.4. Position aircraft on the De-icing Pad before applying ADAF. In situations when an aircraft cannot be placed completely onto the De-icing Pad (for example, a larger transient aircraft), conduct the ADAF application in a ramp location that will allow the maximum ADAF collection by the sweeper trucks.

A1.1.5. Prior to beginning ADAF application, activate the De-icing Pad valve to direct drainage to the collection tank.

A1.1.6. Conduct ADAF application in a manner that minimizes over spray of ADAF.

A1.1.7. Maintain the De-icing Pad valve in the collection tank position for a minimum of one hour to allow adequate drainage from the pad. A visual check of the pad area will be performed before switching the valve to the storm sewer position. The visual check will be conducted jointly with a CEV representative if the operation occurs during normal operating hours. If sweeper trucks are collecting used ADAF, the valve should be maintained in the collection tank position until the sweeping operation is complete and the collected ADAF has been emptied into the collection tank via the appropriate drain.

A1.1.8. Document the following for each event in which ADAF is applied:

A1.1.8.1. Time at which De-icing Pad valve was switched to the collection tank position.

A1.1.8.2. Amount of ADAF used, as applied.

A1.1.8.3. Ratio of raw ADAF to water used for the event.

A1.1.8.4. Initials of persons conducting visual check of De-icing Pad after the 1-hour waiting period.

A1.1.8.5. Time at which the De-icing Pad valve was returned to the storm sewer position.